Development of an atom interferometer gravity gradiometer for applications in space

Authors: N. Yu, James M. Kohel, and L. Maleki

Abstract:
Atom interferometers have been demonstrated to be able to measure gravity gradient with ultra-high sensitivity. The sensitivity can be enhanced much further when the gradiometer is operated in space because of longer interrogation time possible. We are developing a ground-based interferometer gravity gradiometer with the goal towards a flyable system. This poster will report its progress and several developments at component level toward a portable version. We will also discuss various issues for applications in space.